REMARKS

In the Final Office Action[1], the Examiner took the following actions: (1) rejected claims 1-8, 10-22, and 24-35 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,807,258 to Cimochowski et al. ("Cimochowski") in view of U.S. Patent No. 6,484,586 to Dutoit et al. ("Dutoit"); and (2) rejected claims 1, 10-22, and 24-28 under 35 U.S.C. § 103(a) as being unpatentable over Cimochowski in view of U.S. Patent No. 5,873,840 to Neff et al. ("Neff").

By this Amendment, Applicant has amended claims 1-4, 7, 8, 12, 15, 17, 19, 22, 25, 28, 29, and 31-33, canceled claims 11 and 18 without prejudice or disclaimer, and added new claim 36-42. Claims 9 and 23 were previously canceled. Upon entry of this Amendment, claims 1-8, and 10, 12-17, 19-22, and 24-42 will be pending and under current examination. For the following reasons, Applicant respectfully traverses the 35 U.S.C. § 103(a) rejections.

I. Independent Claim 1

In view of the claims as amended, the art of record does not establish a *prima facie* case of obviousness. Cimochowski fails to teach or suggest "at least one pressure sensor in fluid communication with the biological fluid, wherein the at least one pressure sensor comprises: a container comprising at least a surface confining a cavity inside the container, said surface comprising at least one opening exposing the cavity to the atmosphere such that a reference pressure inside the cavity is equal to atmospheric

[1] The Final Office Action may contain statements characterizing the related art, case law, and claims. Regardless of whether any such statements are specifically identified herein, Applicant declines to automatically subscribe to any statements in the Final Office Action.

pressure; and an electric circuit arranged in the container, wherein the electric circuit is energizable by an alternating electromagnetic field at a characteristic frequency, wherein the characteristic frequency of the electric circuit is indicative of a difference between a pressure of the biological fluid and the reference pressure," as recited in independent claim 1.

In the Final Office Action, the Examiner appears to allege that the "pressure transducer 226" as disclosed by Cimochowski corresponds to the claimed "pressure sensor." (Final Office Action at p. 3.) Applicant respectfully disagrees. For example, Fig. 19A and Fig. 19B of Cimochowski illustrate "pressure transducers 226...incorporated within the wall of the graft for monitoring the pressure of fluid passing through the graft." Cimochowski at col. 23, ll. 60-63. As shown in Fig. 19A, "pressure transducer 226" is located in a chamber completely enclosed by "layer 190" and "inner coating 224." Thus, the "pressure transducer 226" of Cimochowski does not comprise the claimed opening exposing the "pressure transducer 226" to the atmosphere "such that a reference pressure inside the cavity is equal to atmospheric pressure." To the contrary, Cimochowski discloses that "[l]ayer 190...is employed to protect the transducers, and other components of the transducer system from bodily fluids that may permeate the graft material." Cimochowski at col. 23, ll. 63-67. Indeed, having an opening on either "layer 190" or "inner coating 224" will introduce "fluid flowing through an interior 222 of the artificial graft" into the chamber of "pressure transducer 226," and thus, render the "pressure transducer 226" inoperable. *See* Cimochowski at col. 24, ll. 19-24.

Therefore, Cimochowski does not teach or suggest "a container comprising at least a surface confining a cavity inside the container, said surface comprising at least one opening exposing the cavity to the atmosphere such that a reference pressure inside the cavity is equal to atmospheric pressure," as recited in amended claim 1, and one skilled in the art will not be motivated to include any opening in the device disclosed by Cimochowski. In fact, Cimochowski would be inoperable if the cavity was exposed to the atmosphere. Therefore, the reference teaches away from the claimed configuration.

Moreover, the Examiner appears to interpret Cimochowski's "first transducer" and "second transducer" as the claimed "electric circuit." *See* Final Office Action at p. 3. This is incorrect. Cimochowski discloses that the "first transducer is adapted to couple to a radio frequency signal" from a "source of energy that is external to the patient's body" and "produces ultrasonic waves when excited by the radio frequency signal." *See* Cimochowski at col. 6, ll. 60-62. However, according to Cimochowski, the radio frequency is merely "controlled to determine a beam angle along which the ultrasonic waves are emitted by the first transducer," and thus, is not "indicative of a difference between a pressure of the biological fluid and the reference pressure," as recited in independent claim 1. Indeed, because Cimochowski fails to disclose that "a reference pressure inside the cavity is equal to atmospheric pressure," as recited in amended claim 1, Cimochowski's device does not measure "a difference between a pressure of the biological fluid and **the reference pressure**," as recited in amended claim 1 (emphasis added).

Thus, for reasons set forth above, Cimochowski does not teach or suggest at least the above-cited features as recited by claim 1.

Finally, neither Dutoit nor Neff cures the deficiencies of Cimochowski. For example, Neff discloses a "circular cylindrical cavity 36 being defined between the wall 40, the diaphragm 26 and a cylindrical side-wall 42," none of "the wall 40, the diaphragm 26 and a cylindrical side-wall 42" comprises any opening exposing the cavity to the atmosphere. *See* Neff at Fig. 3 and col. 6, ll. 6-9. Dutoit discloses "openings 113 and 114" on "cover plates 103 and 104," respectively. Dutoit at Fig. 1 and col. 8, ll. 15-23. However, according to Dutoit, "opening 113" is provided "to create a passage for a fluid which is under a first measurement pressure from outside the housing to the first measurement space 111 so that the latter is exposed to the first measurement pressure," rather than to expose "the first measurement space 111" to the atmosphere such that the pressure inside the "first measurement space 111" is equal to atmospheric pressure, as required by amended claim 1. *See* Dutoit at Fig. 1 and col. 8, ll. 28-51. In addition, as explained, "openings 113 and 114" disclosed by Dutoit, if included on either "layer 190" or "inner coating 224" disclosed by Cimochowski, will render the device in Cimochowski inoperable. Therefore, claim 1 is not obvious over Cimochowski in view of either Detoit or Neff, as applied by the Examiner

In view of the above, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Accordingly, the Examiner has not met the burden of establishing a *prima facie* case of obviousness of claim 1. Therefore, the rejections of claim 1 under 35 U.S.C. § 103(a) based on

Cimochowski and Dutoit, and alternatively based on Cimochowski and Neff, are improper and must be withdrawn.

II. Independent Claim 29

Independent claim 29, while of different scope, contains recitations similar to those of independent claim 1. For example, claim 29 recites, among other things, "a container exposed to the atmosphere, such that the reference pressure within the container is equal to atmospheric pressure; and an electric circuit arranged in the container, wherein the electric circuit is energizable by an alternating electromagnetic field at a characteristic frequency, wherein the characteristic frequency of the electric circuit is indicative of a difference between a pressure of the biological fluid and the reference pressure," which is not taught or suggested by any of the cited references, or any combination thereof. Therefore, the rejections of claim 29 under 35 U.S.C. § 103(a) based on Cimochowski and Dutoit, and alternatively based on Cimochowski and Neff, are also improper and must be withdrawn.

Furthermore, the rejections are legally deficient, because the Final Office Action failed to address the pertinence of the cited references to each limitation of independent claim 29. The Examiner is required by 37 C.F.R. § 1.104(c) to provide more information than merely stating that a claim is rejected based on a reference. In particular, 37 C.F.R. § 1.104(c)(2) states:

> When a reference is complex or shows or describes inventions other than that claimed by the appellant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.

Applicant notes that the limitation of "a container" was included in new claim 29, as submitted by Applicant's Reply to Office Action filed on June 9, 2009. However, in the Final Office Action, the Examiner completely failed to address this limitation. As such, the Examiner's rejections of independent claim 29 under 35 U.S.C. § 103(a) do not meet the requirements of 37 C.F.R. § 1.104, and thus, are improper and must be withdrawn.

III. Dependent Claims 2-8, 10, 12-17, 19-22, 24-28, and 30-35

Claims 2-8, 10, 12-17, 19-22, and 24-28 depend from independent claim 1, and claims 30-35 depend from independent claim 29. Therefore, these dependent claims are allowable at least by virtue of their dependence from allowable independent claims 1 and 29.

Furthermore, each of the dependent claims recites additional limitations that are not taught or suggested by the cited references. For example, each of claims 3 and 31 recites that "said component forming a resonance circuit energizable by the alternating electromagnetic field, wherein said characteristic frequency is a resonance frequency of the resonance circuit decided by a characteristic parameter of said component, wherein said characteristic parameter of said component is configured to vary with the compression and/or expansion of the container." The Final Office Action is incorrect to allege that Dutoit teaches this limitation. Dutoit merely teaches that "[a] change of the differential pressure...causes a deflection of the measurement membrane 150," and "the magnetic means 160...are moved relative to the coils 121, 122 and...produce one induction current at a time in the two coils 121, 122." Dutoit at col. 9, ll. 56-65.

Nowhere in Dutoit does it teach or suggest that the "coils 121, 122" form the claimed "resonance circuit" or that "said characteristic frequency is a resonance frequency of the resonance circuit decided by a characteristic parameter of said component," as recited by claims 3 or 31. Furthermore, Dutoit also fails to teach or suggest that "said characteristic parameter of said component is configured to vary with the compression and/or expansion of the container," as recited by claims 3 or 31. For this additional reason, dependent claims 3 and 31 are not obvious over the cited references, and are patentable over the cited art.

IV. New Claims 36-42

New claims 36-42 depend from independent claim 1. For at least this reason, claims 36-42 are allowable at least by virtue of their dependence on allowable independent claim 1.

Furthermore, each of the dependent claims recites additional limitations that are not taught or suggested by the cited references. For example, the cited references, taken alone or in combination, do not teach or suggest that "the electrical signal is a current dip in the oscillator, wherein the control unit is configured to identify the frequency of the alternating electromagnetic field corresponding to the current dip as the characteristic frequency," as recited by claim 37. Therefore, Applicant respectfully requests consideration and allowance of new claims 36-42.

V. Conclusion

In view of the foregoing, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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